

TITLE:

Brief Results of Studying the Connection of Surface Electronic States of Semiconductors with Catalytic Phenomena (Kratkiye itogi izucheniya svyazi poverkhnostnykh elektronnykh sostoyaniy poluprovodnika s kataliticheskimi yavleniyami)

temperature changes of cupric oxide were studied in the atmospheres of O, CO and CO<sub>2</sub>. It turned out that at temperatures from 20 to 150°C, the contact potential value remained constant in a vacuum, increased with adsorption of oxygen or carbon monoxide, but remained almost constant when heating the cupric oxide within these temperatures. When the mixture of oxygen and carbon monoxide was used, the contact potential value sharply decreased at the instant that catalytic reaction sets in as Graph 1 shows.

Elec conductivity was measured simultaneously. In a vacuum and in the oxygen or carbon monoxide atmospheres, the functional dependence  $\lg \sigma (1/T)$  was represented by a straight line ( $\sigma$  denotes elec conductivity). In the case of an oxygen and carbon monoxide mixture, the straight

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line was broken, and the break point corresponded with the temperature at which a sharp contact potential change and generation of catalytic reaction products were observed.

Experiments showed that similar results were obtained when cupric oxide was replaced with nickel oxide. These experiments have shown that the course of contact potential temperature changes is determined by the process of catalytic reaction, and not by semiconductor properties.

A possible interpretation of these experiments, proposed by the authors, is the following: oxygen is adsorbed on surface levels occupied by electrons. A surface level electron is sucked into an oxygen molecule, and the contact potential value therefore rises.

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The catalytic activity of a semiconductor depends on the number of electrons and holes on its surface levels. This connection was confirmed experimentally with manganese dioxide samples, which were heated at various temperatures from 200 to 300 °C in a vacuum. This produced samples with different values of conductivity and contact potential. Fig 3 shows that the samples with larger changes in contact potential at gas adsorption also possessed higher rates of catalytic reaction. Therefore, there is a close connection between the rate of a catalytic reaction and the change in filling the surface levels. In this respect, the qualitative aspect is stated but the quantitative is not attempted.

A reaction of nitrogen oxide dissociation on nickel oxide as a catalyzer was also investigated. In all cases, the minimum in the contact potential curve and the existence of  $N_2O$  dissociation products were

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observed at a temperature of aprx. 100°C. The general conclusion from all these experiments is as follows: There exists a close relation between the changes of contact potential and surface electronic states of semiconductors, on the one hand, and catalytic reactions on the semiconductor surface, on the other hand. The relation exists in both oxidation and dissociation reactions.

4 graphs are added. The article contains 9 references, of which 4 are Slavic (Russian).

**INSTITUTION:** Institute of Physics of the Ukrainian Academy of Sciences

**PRESENTED BY:**

**SUBMITTED:** No date

**AVAILABLE:** At the Library of Congress.

Card 5/5

STEPKO, I. I.

Distr: 4E4j

<sup>27</sup> <sup>24</sup>  
 ✓ Effects of oxygen on the work functions of an electron from copper oxide. V. I. Lyashenko and I. I. Stepko (Acad. Sci. Ukr. S.S.R. Inst. Phys., Moscow). *Zhur. Fiz. Khim.* 31, 1825-9(1957); cf. *C.A.* 50, 1433c.—The changes in the work function and cond. when samples of CuO were heated after the admission of gases may have resulted from the gas adsorption or diffusion during heating. Changes in the function with time were studied at 70-80°, 110-120°, and 190-200° in order to evaluate the role of each factor, by measuring the elec. cond. and the contact p.d. immediately after introducing the gas and at some time later, until satn. was complete. With thin layers of Cu<sub>2</sub>O and CuO on the Cu in O<sub>2</sub> atm. the work function and cond. decreased sharply at first, then increased, and the rise was more rapid at higher temps. The fall in the work function and cond. was caused by chemisorption, in agreement with P. F. Vol'kenshtein's theory (*C.A.* 48, 2440f, 6777b) on the appearance of new electrons on the surface layers during adsorption, resulting in an increase of the surface charge. A comparison of the available data on the heat of adsorption and diffusion activation (7 and 39 kcal./mol., resp.) caused a subordinate role to be assigned to diffusion.

W. M. Sternberg

*W. M. Sternberg*

ROMANOVA, G.P. [Romanova, H.P.]; STEPKO, I.I.

Electronic phenomena on the surface of germanium during adsorption  
and catalysis. Dop. AN URSR no.6:585-586 '58. (MIRA 11:9)

1. Institut fiziki AN USSR. Predstavil akademik AN USSR V.Ye.  
Lashkarev [V.IE. Lashkar'ov]  
(Germanium)

STEPKO, I.I.; ROMANOVA, G.F. [Romanova, H.P.]; CHMEL', N.G. [Chmel', M.H.]

Effect of thermal treatment on the liberation of gas from the surface  
of germanium. Urk. fiz. zhur. 5 no. 5:705-707 S-O '60.

(MIRA 14:4)

1. Institut fiziki AN USSR.

(Germanium)

LYASHENKO, V.I.; ROMANOVA, G.F.; STEPKO, I.I.

Contact potential of the surface of germanium in adsorption and catalysis. Probl. kin. i kat. 10:111-116 :60. (MIRA 14:5)

1. Institut fiziki AN USSR.  
(Germanium) (Catalysis) (Adsorption)

L 17923-63  
ACCESSION NR: AT3002443

EWP(q)/EWT(m)/BDS

AFFTC/ASD

JD/JG

S/2935/62/000/000/0085/0032

59  
58

AUTHOR: Romanova, F. G.; Stepko, I. I.

TITLE: Silicon<sup>1</sup> surface gassing [Report at the Conference on Surface Properties of Semiconductors, Institute of Electrochemistry, AN SSSR, Moscow, 5-6 June 1961]

SOURCE: Poverkhnostnyye svoystva poluprovodnikov. Moscow, Izd-vo AN SSSR, 1962, 85-92

TOPIC TAGS: silicon, silicon-surface gassing, silicon etching

ABSTRACT: An attempt is described to determine the quantity and composition of gases adsorbed by Si single crystals<sup>4</sup> as a result of etching. Specimens of p-Si with a 50-ohms.cm resistivity were etched for 1 min in 2HF : 3HNO<sub>3</sub> mixture. By heating the specimen to 600-800C and higher, the gases were desorbed; their quantity and mass spectrum were determined. The gases consisted chiefly of H<sub>2</sub>O and CO; traces of N<sub>2</sub>, H<sub>2</sub>, and CO<sub>2</sub> were also found but they could have been due to the presence of incandescent tungsten filaments, glass, etc. in the vacuum vessel. "We are sincerely thankful to V. I. Lyashenko for his/her constant interest in the work and discussing the results." Orig. art. has: 8 figures.

Card 1/2

L 17923-63

ACCESSION NR: AT3002443

ASSOCIATION: Institut poluprovodnikov AN UkrSSR (Institute of Semiconductors,  
AN UkrSSR)

SUBMITTED: 00

DATE ACQ: 15May63

INCL: 00

SUB CODE: PH

NO REF SOV: 003

OTHER: 004

Card 2/2

LYASHENKO, V.I. [Liashenko, V.I.]; SERBA, A.A. [Serba, O.A.]; STEPKO, I.I.

Effect of an electric field on sorption processes on a germanium surface. Dop. AN URSR no.3:350-353 '62. (MIRA 15:5)

1. Institut poluprovodnikov AN USSR. Predstavleno akademikom AN USSR V.Ye.Lashkarevym [Lashkar"ov, V.IE.].  
(Desorption) (Germanium) (Electric fields)

STEPKO, I. P.

A short summary of the study of the relation between elec-

ture of  $\text{CO}_2$  and  $\text{CO}$  and has a break at the same temp. The same observation is made in  $\text{NiO}$  -  $\phi$  increases with adsorption of  $\text{O}$  by loss of electrons at the surface until the maximum potential of  $\text{CO}$  is reached. Since with increasing temp. the number of electrons increases, the rate of  $\text{CO}$  adsorption and  $\phi$  decreases again. Samples of  $\text{NiO}$  that show the largest change in  $\phi$  have the largest catalytic activity. The decompn. of  $2\text{NiO} \rightarrow 2\text{Ni} + \text{O}_2$  was investigated on 1- $\mu$  layers of evapd. 50 ohm cm.  $\text{Ge}$ . The reaction took place at  $180^\circ$  on freshly evapd. surfaces and there is a decrease in  $\phi$  as the reaction proceeds by the reaction

any

STEPKO, V.I.

Effect of heat on the summation of stimulations in the center of  
the flexion reflex. Fiziol.zhur. [Ukr.] 11 no.4:526-529 J1-Ag '65.  
(MIRA 18:10)

1. Kafedra normal'noy fiziologii Donetskogo meditsinskogo  
instituta.

( S/085/60/000/03/045/062  
D001/D003

AUTHOR: Stepko, Yu. (Sochi)

TITLE: A Relayless Single-Command Radio-Receiver for Model Aircraft

PERIODICAL: Kryl'ya rodiny, 1960, Nr 3, p 27 (USSR)

ABSTRACT: The receiver which the author describes was successfully tested at the aviamodel'nyy kruzhok Doma pionerov (Aeromodelling Circle at the House of Pioneers) in Sochi and proved to have advantages over a similar model powered by a single KBS-0.5 baby battery. The subject of the present article is shown by a circuit diagram (Figure 2) and its components include a 2P1P tube, an NCh amplifier, PEL 0.7, PEL 0.05 ÷ 0.06 and PESh0 0.15 wire, a VS-0.5 resistance and an RUM-1 or other transmitter. There are 2 sets of circuit diagrams and 1 circuit diagram.

Card 1/1

STEPKOV, S.M.

Accumulation of carbohydrates in the tubers of *Helianthus tuberosus* L. during the vegetative development of the plant.  
Biokhimiia 26 no.4:569-574 J1-Ag '61. (MIRA 15:6)

1. Laboratoriya organicheskoy khimii Sel'skokhozyaystvennogo Instituta, Ul'yanovsk.

(CARBOHYDRATES)  
(JERUSALEM MATCHES)

BARTOSZEWSKI, Adam; STEPKOWSKA, Irena; KLONOWSKI, Henryk

Trichomycin in the treatment of Trichomonas infections in humans.  
Polski tygod.lek. 14 no.51:2236-2239 21 Dec. '59.

1. Z I Kliniki Polozniczej i Chorob Kobietych A.M. w Lublinie;  
kierownik: prof.dr. St. Liebhart.  
(ANTIBIOTICS ther.)  
(TRICHOMONAS INFECTIONS ther.)

STEPNICKI, J.

New projects of dwellings for statefarms workers.

P. 9, (Rudwoietwo Weiskei, Vol. 9, no. 10, Oct. 1956, Warszawa, Poland)

Monthly Index of East European Accessions (F AI) LC. vol. 7, no. 2,  
February 1958

Brucellin P. S. and mallein P. S. I. Parnas and S. Stepkowski. *Medycyna Heterogarnyana* 3, 1617-50, 1947; *Biol. Abstracts* 22, 1429(1948).—By biochem. methods a specific substance was obtained from *Brucella abortus* which contained both the proteins and the polysaccharides. By alternate freezing and thawing 2 other preps. were obtained from this substance, and their antigenic nature was tested. The fraction contg. both polypeptides and polysaccharides did not give a pptn. reaction. The polysaccharide fraction appeared to be useful for the complement-fixation test. Further freezing and thawing of this fraction gave a ppt. which gave very good results as an allergen for rabbits infected with *B. abortus*. When tested in cattle it appeared to be as good an allergen as Abortin. Mallein P. S., also obtained by thawing and freezing of a *Mycobacterium mallei* culture, appeared to give better results than other mallein preps. The technique used and the exptl. investigations on animals are described and discussed. R. D. H.

PARNAS; KUNICKI, W.; STEPKOWSKI, S.

Investigations on colibacillosis in pigs. Med.dosw.Mikrob. 2 no.2:  
235-236 1950. (GLML 20:6)

1. Summary of the report given at 10th Congress of the Polish Micro-  
biological and Epidemiological Society held in Gdansk, Sept. 1949.  
(Lublin).

PARNAS, J.; KUNICKI, W.; STEPKOWSKI, S.

Investigations on strains of *Corynebacterium* isolated in animals.  
Med.dosw.Mikrob. 2 no.2:236-238 1950. (CML 20:6)

1. Summary of the report given at 10th Congress of the Polish Microbiological and Epidemiological Society held in Gdansk, Sept.1949. (Lublin).

STEPKOWSKI, STEFAN

Chemical Abst.  
Vol. 48  
A pr. 10, 1954  
Biological Chemistry

(3)

✓ The action of streptomycin on some microorganisms of the *Pasteurella multocida* group. Stefan Stepkowski (Z. Zakładu Mikrobiol. i Epizootol. U.M.C.S. oraz Wojew. Zakładu Hig. Weterynaryjnego, Lublin, Poland). Ann. Univ. Mariae Curie-Skłodowska, Lublin-Poland, Sect. DD, 5, 465-64 (1950) (English summary). — A study was made on white mice, hens, and rabbits of the action of streptomycin (S) on the infections caused by *P. aviseptica*, *P. cuniculi-septica*, *P. suis-septica*, and *P. vituliseptica*. Mice receiving at least 4.0 my 1/day for 5 days and hens receiving at least 60 my 1/day for 4 days and 40 my 1/day for the next 2 days survived, but rabbits obtaining 60 my 1/day for 6 days died. L. J. Piotrowski

PARNAS, J.; KUNICKI-GOLDFINGER, Wl.; STEPKOWSKI, S.; LORKIEWICZ, Z.;  
DABRAWSKI, T.

Research on hemolytic Bacteria coli isolated from hogs. Med.wet.6  
no.12:717-721 Dec 50. (CJML 20:6)

1. Of the Institute of Microbiology and Epizootology of the Veterinary  
Faculty of Marie Curie-Sklodowska University in Lublin and of the  
Regional Institute of Veterinary Hygiene in Lublin (Head--Prof.Jo-  
zef Parnas).

PARNAS, J.; KUNICKI, W.; STEPKOWSKI, S.; LORKIEWICZ, Z.; DABROWSKI, T.

Attempt of typing of strains of enteric bacteria with bacteriophages. Med. dosw. mikrob., Warsz. 4 no. 3:332-333 1952. (CML 23:3)

1. Summary of work progress presented at 11th Congress of Polish Microbiologists held in Krakow May 1951. 2. Lublin.

PARNAS, J.;STEPKOWSKI, S.;DABROWSKI, T.;PIENIAZEK, J.

**Studies on Listerella and Corynebacterium in animals. Med. dosw. mikrob., Warsz. 4 no. 3:334-336 1952. (GLML 23:3)**

1. Summary of work progress presented at 11th Congress of Polish Microbiologists held in Krakow May 1951. 2. Lublin.

PARNAS, J.;STEPKOWSKI, S.;DABROWSKI, T.;LORKIEWICZ, Z.

Effect of streptomycin, aureomycin and chloramphenicol on micro-organisms in animals. Med. dosw. mikrob., Warsz. 4 no. 3:337-338 1952. (GLML 23:3)

1. Summary of work progress presented at 11th Congress of Polish Microbiologists held in Krakow May 1951. 2. Lublin.

POL . .

MD

✓ Animal corynebacteria, with particular reference to *Corynebacterium equi*. J. Parnas, T. Dabrowski, S. Stepkowski, Z. Lorkiewicz, and T. Mierzejewski (*Ann. Univ. M. Crac. SM. Med.*, 1952, 7, 209—382).—This detailed monograph includes bacteriology, serology, immuno-chemistry and epizootiology. The described characteristics of the different corynebacteria have been investigated. The causative agent of dangerous pyobacillosis in foals, *C. equi*, has been studied in great detail and recommendations for treating the disease include use of streptomycin, vaccine III and Camphochin. A recommendation of early and frequent vaccination of foals is given. Included E.M. photographs show that *C. equi* has a capsule and the bacteriophage of *C. equi* is established, it exhibits a prophylactic action in experiments. Twenty collected strains have an identical species-group antigen and a type-specific one. An antigenic heterogeneity is present among the strains of *C. pyogenes*, *C. pyogenes humanum* is closely antigenic to *C. pyogenes bovis*, indicating the possibility of the transfer of infection from bovis to man.

E. M. RATTENBURY.

(4)

STEPKOWSKI, S.

P O L . 3

✓ Effect of aureomycin, chloramphenicol, and Brucellin-PS on brucellosis. J. Parnas, S. Stepkowski, and T. Rukasz (*Ann. Univ. M. Curie-Skłodowska*, 1953, D, 8, 37-51).--Groups of rabbits and guinea pigs infected with *Brucella abortus* were treated with aureomycin, chloramphenicol, Brucellin-PS, and the antibiotics together with Brucellin-PS. All the treated animals were (2)

alive after 3 months, whereas half the controls died. Aureomycin is preferred for the treatment of brucellosis, as it gives a high proportion of cures, with complete elimination of *Brucella*, and does not give toxic reactions.

R. TRUSCOE.

STEPKOWSKI, S.

POLAND

"Brucellosis in Sheep in the Flock 'J' of the State Agricultural Farm 'S', by S. STEPKOWSKI and S. WOLOSZYNI. Research conducted at Chair of Epizootiology, Veterinary Faculty, Higher School of Agriculture, Lublin. Dir. - Prof. Dr. Stanislaw Krauss. Medycyna Weterynaryjna, Vol. XII, No. 3, Warsaw, PWRIL, March, 1956.

KRAUSS, St.; STEPKOWSKI, S. (Lublin)

Preliminary observations of the opsonocytaphagic test and the formol-gel test of Ciuka in equine infectious anemia. Rocz nauk roln wet 70  
no.1/4:197-199 '60. (KEAI 10:9)

(Horses)	(Infectious anemia)	(Opsonins and opsonic index)
	(Cytophaga)	(Formaldehyde)

STEPKOWSKI, Stefan ---

Studies on the properties of trichomonads in swine and cattle.  
Wiadomosci parazyt. 7 no.2:359-361 '61.

1. Katedra Epizocjologii Wydz. Wet., Lublin.

(TRICHOMONAS INFECTIONS veterinary)  
(SWINE parasitol) (CATTLE parasitol)

STEPKOWSKI, S.

The technic of the tube agglutination test with animal trichomonads.  
Wiadmosci parazyt. 7 no.2:363-364 '61.

1. Katedra Epizocjologii Wydz. Wet., Lublin.

(TRICHOMONAS immunol)

- STEPKOWSKI, Stefan

The colloidal phagocytic test in studies on the antigen structure of trichomonads. Wiadomosci parazyt. 7 no.2:365-366 '61.

1. Katedra Epizoocjologii Wydz. Wet., Lublin.

(TRICHOMONAS INFECTIONS immunol) (PHAGOCYTOSIS)

POLAND

STEPKOWSKI, Stefan; and RZEDZICKI, Janusz, Department of Poultry Diseases of the Veterinary College of the Agricultural University, Lublin (Zaklad Chorob Drobiu Wydzialu Weterynarii WSR) Head (Kierownik) Docent Dr. Stefan STEPKOWSKI

"Observations on the Action of Furazol W in Intestinal Coccidiosis in Chickens"

Lublin, Medycyna Weterynaryjna, Vol 22, No 11, Nov 66; p. 681-682

Abstract [English summary modified]: Treatment of intestinal coccidiosis in chicks with nitrofurazone was more effective when the water soluble preparation Furazol W was added to the drinking water than when Furacoccid was admixed with the feed. However, availability of any drinking water other than the medicated one (such as rain puddles and dew) would decrease the effectiveness of treatment. 2 tables; 1 Czech, 4 Polish, 4 Western references.

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Z/011/62/019/001/004/017  
E073/E136

AUTHORS: Ciborowski, J., and Steplewski, B.

TITLE: On the influence of particle size on the speed of infrared drying

PERIODICAL: Chemie a chemická technologie. Přehled technické a hospodářské literatury, v.19, no.1, 1962, 22, abstract Ch 62-300. (Chem. stos., v.5, no.1, 1961, 3-16).

TEXT: The influence of the size of sand particles on the speed of drying with infrared rays was investigated. The particle diameters varied between 0.102 and 2.5 mm. The first as well as the second drying period was studied. The existence was proved of an optimum diameter of solid particles which corresponded to the maximum speed of drying. The dependence was determined of the absorption capacity of the sand layer on the size of the particles during heating. A similar relation was found to exist for the heat-transfer coefficient.

9 figures, 1 table, 9 references.

[Abstractor's note: Complete translation.]

Card 1/1

STEPLEWSKI, Bohdan; TUSZYŃSKI, Kazimierz

Rectification as an object of regulation. Przem chem 40 no.8:419-421  
Ag '61.

STEPIEWSKI, Bohdan

Static quality of the automatic control of bicomponent mixture  
rectification. Przem chem 41 no.3:117-121 Mr '62.

1. Badawczo-Doswiadczalny Ośrodek Automatyzacji "Chemopomiar", Warszawa.

VORBRODT, Andrzej; JONEK, Jan; STEPLEWSKI, Zenon

Histochemical studies on the effect of estrogens on the uterus and vagina of castrated mice. I. Distribution of DPNH diaphorase and succinic dehydrogenase. Endokr. pol. 14 no.1:57-68 '63.

1. Zaklad Histologii i Embriologii Sl. AM w Zabrze-Rokitnicy

Kierownik: doc. dr A. Vorbrodz.

(UTERUS) (VAGINA) (ESTROGENS)

(PHARMACOLOGY) (SUCCINATE DEHYDROGENASE)

BFRKA, Mieczyslaw; STEPLEWSKI, Bohdan; DRAMINSKA, Krystyna

Studies on the rectification process as a control object. Przem  
chem 42 no.1:41-45 Ja '63.

1. Badawczo-Doswiadczalny Osrodek, Pracownia Pomiarow i Automatyki  
Chemopomiar, i Instytut Chemii Ogolnej, Warszawa.

POLAND

2. STEPLEWSKI and Z. GLKOWSKI, Department of Histology and Embryology,  
Medical College (Zaklad Histologii i Embriologii, II (=Akademia Medyczna),  
Zabrze-Rokitnica.

"Cytochemical Studies on the Interrelation Between Lysosomes and the  
Golgi Body in the Uterine Epithelium."

Warsaw, Bulletin de l'Academie Polonaise des Sciences, Serie des  
Sciences Biologiques, Vol 10, No 11, 1962; pp 495-497.

Abstract (English article): Study on 20 spayed estradiol-primed mice.  
Discussion of the role of Golgi apparatus in the production of the  
lysosomes. Twelve microphotographs. 6 references.

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KOZUBSKA, Mieczyslaw; STEPLEWSKI, Zenon

Histochemical studies on the effect of cortisone on the early stages of liver regeneration in rats. Endokr. pol. 14 no.1: 19-35 '63.

1. Zaklad Histologii i Embriologii Ogolnej w Zabrze-Rokitnicy  
Kierownik: doc. dr A. Vorbrodt.  
          (CORTISONE) (PHARMACOLOGY)  
                 (LIVER REGENERATION)  
                 (HISTOCHEMISTRY)

JONEK, Jan; STEPLEWSKI, Zenon

Histochemical studies on the effect of estrogens on the  
adrenals of castrated mice. Endokr. pol. 14 no.4:371-387  
'63.

1. Zaklad Histologii i Embrologii Slaskiej Akademii Medycznej  
w Zabrze-Rokitnicy Kierownik: doc. dr A. Vorbrodt.  
(CASTRATION) (ESTRADIOL) (ADRENAL GLANDS)  
(ALKALINE PHOSPHATASE) (ACID PHOSPHATASE)  
(ADENOSINE TRIPHOSPHATASE) (DESOXYRIBONUCLEASE)  
(ESTERASES) (PARATHION) (LIPOAMIDE DEHYDROGENASE)  
(HISTOCHEMISTRY)

GLOWINSKI, Mieczyslaw; STEPLEWSKI, Zenon

Histochemical studies on the localization of phosphatase activity in the decidua. Ginek. pol. 34 no.4:453-461 '63.

1. Z I Kliniki Poloznictwa i Chorob Kobietych Sl. AM w Zabrze  
Kierownik: prof. dr med. M. Glowinski.  
(DECIDUA) (PHOSPHATASES) (HISTOCHEMISTRY)

JONEK, Jan; STEPLEWSKI, Zenon

Histochemical studies on the effect of estrogens on the uterus and vagina of castrated mice. II. Distribution of specific and non-specific phosphatases, non-specific esterase and E 600-resistant esterase and acid desoxyribonuclease in the vagina. Endokr. pol. 14 no.3:247-260 '63.

1. Zaklad Histologii i Embriologii Sl. AM w Zabrze-Rokitnicy  
Kierownik: doc. dr A. Vorbrodt.

(VAGINA) (ESTRADIOL) (PHARMACOLOGY)  
(HISTOCHEMISTRY) (PHOSPHATASES) (ESTERASES)  
(DESOXYRIBONUCLEASE) (PARATHION)

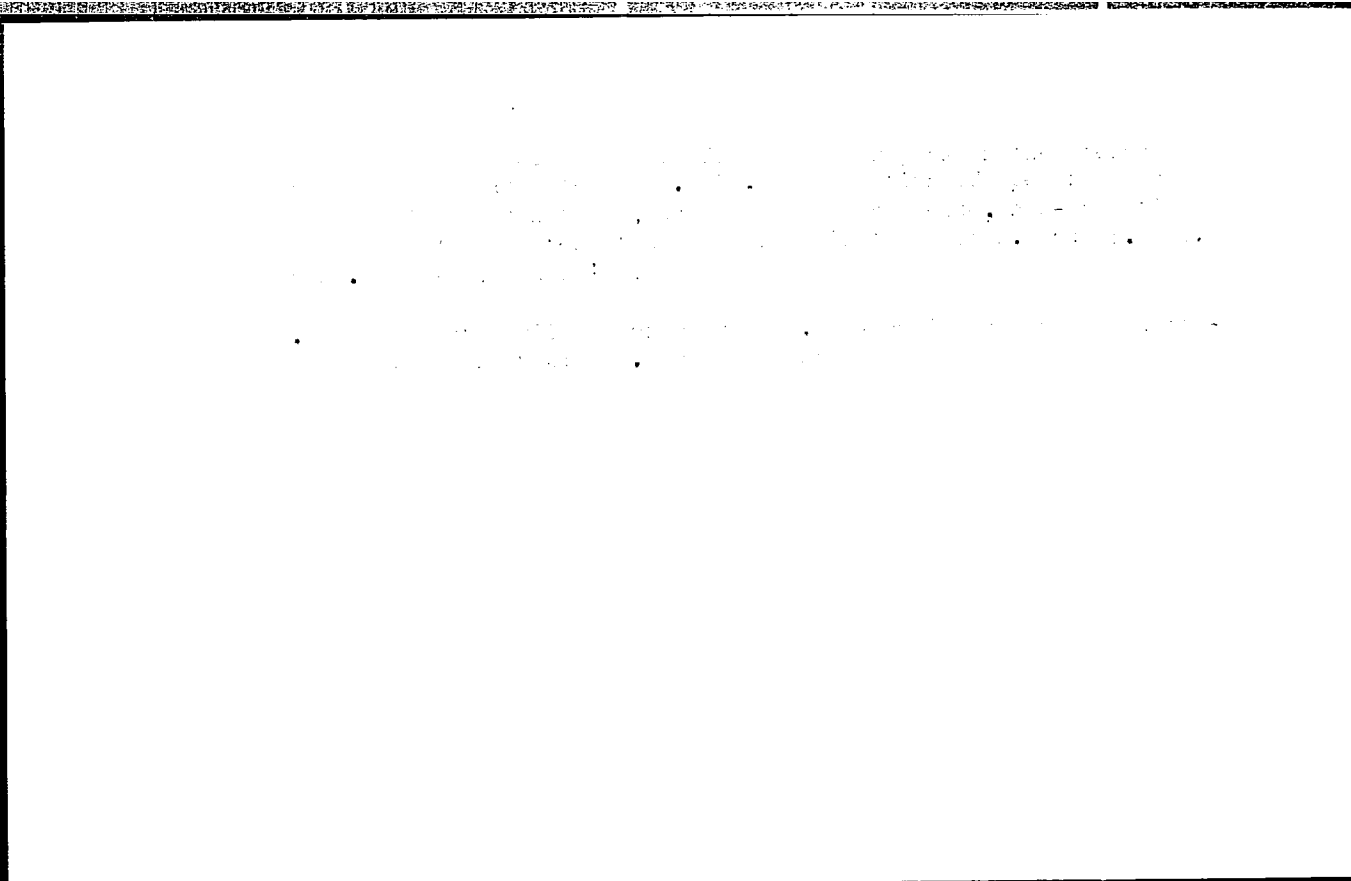
JONER, Jan; JEMIELSKI, Zenon; KANASIBNIM, Kainorzata

Histochemical studies on the effect of estrogens on the uterus and vagina of castrated mice. V. Distribution of -SH and -SS protein groups, mucopolysaccharides and glycogen and on the metachromatic reaction of the uterus. Endokr. Pol. 15 no.2:213-225. Pr-Apr '64.

1. Zakład Histologii i Embriologii Państwowej Akademii Medycznej w Warszawie (Kierownik: doc. dr. A. Vorbrodt).

"APPROVED FOR RELEASE: 08/26/2000

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GLOWINSKI, Mieczyslaw; STEPLEMSKI, Zenon; WARCUSKI, Wlodzimierz

A study of the reticuloendothelial system (RES) in experimental toxoplasmosis. Wlad. parazyt, 10 no.4:367 '64

1. I Klinika Poloznictwa i Chorob Kobietych Slaskiej Akademii Medycznej, Zabrze.

VORBRUCH, A.; STEPIEWSKI, Z.; POINIERCZYK, Z.

Cytochemical investigations on the localization of oxidative enzymes in isolated nuclei of the rat liver. Folia histochem. cytochem. (Krakow) 3 no.2:137-142 '65.

1. Department of Tumour Biology, Institute of Oncology, Gliwice.

ZIAREK, Stanisław; STEPIEWSKI, Z.

Function of the reticulendothelial system of the liver in  
experimental traumatic shock. Med. pracy 16 no.4:283-287 '55.

1. Z I Kliniki Chirurgicznej Śląskiej AM w Zabrzu (Kierownik:  
prof. dr. med. S. Szyszko) i z Zakładu Histologii Śląskiej AM  
w Zabrzu (Kierownik: doc. dr. med. A. Vorbrodt).

KUBACKI, Jozef; STERLEWSKI, Zenon; SICHANSKI, Roman; KUBACKI, Andrzej

Effect of thyroxin on the morphology and catecholamine content of the adrenal medulla. Pol. arch. med. wewnet. 35 no.4:491-496 1965.

1. Z I Kliniki Chorob Wewnetrznych Slaskiej AM (Kierownik: prof. dr. med. J. Japa) i z Zakladu Biologii Nowotworow Instytutu Onkologii w Gliwicach (Kierownik: doc. dr. med. M. Chorazy).

KRAUSE, Mieczyslaw; STEPLEWSKI, Zygmunt

On fatigue in the myoneural synapse. Acta physiol pol 12 no.3:  
381-387 '61.

1. Z Zakladu Fizjologii Slaskiej A.M. w Zabrze-Rokitnicy p.o.  
kierownika: dr M. Krause.  
(MYONEURAL JUNCTION) (FATIGUE)

STEPLOVA, Dagmar, inz.

Education of glassmakers. Sklar a keramik 14 no.4:105-  
106 Ap '64.

1. Ministry of Education and Culture, Prague.

STEPLOVA, Dagmar, inz.

Acceptance of students at technical high schools. Sklar a  
keramik 15 no.2:3 of cover F '65.

1. Ministry of Education and Culture, Prague.

KOLPAKOVA, T.A.; GOLYENBIYEVSKAYA, Z.I.; SHEVTSOVA, N.I.; RYBINA, M.I.;  
NIKITINA, N.N.; RYBAKOVA, L.F.; SHIPSHINA, N.D.; KORN, A.N.; KO-  
ROVKIN, B.F.; KOSYAKOV, K.S.; STEPNEYA, A.A.

Suggestions made at the September 29, 1963, conference of "La-  
boratornoe delo" readers, members of the Leningrad Society of Phy-  
sicians and Laboratorians. Lab. delo 10 no.4:256 '64. (MIRA 17:5)

1. Predsedatel' pravleniya Leningradskogo obshchestva vrachey-la-  
borantov (for Kolpakova). 2. Chleny pravleniya Leningradskogo ob-  
shchestva vrachey-laborantov (for all except Kolpakova).

11/10147

L 00166-66

ACC NR: AP6025681

into an eye ring, and an auxiliary canopy placed inside the main canopy (see Fig. 1). To increase reliability and improve operational qualities, the auxiliary canopy in the form of a reversed cone is fastened to the main canopy's internal shroud lines, which are brought into a small eye ring connected to the main eye ring by a central strand. Orig. art. has: 1 figure. [WH]

SUB CODE: 01/ SUBM DATE: 03May65/ ATD PRESS: 5049

Card 2/2 P/LP

SUJAK, I.; GASIOR, S.; STEPNEWSKI, W.

On the effect of an external electric field on the emission of electrons from additively colored KCl into a gaseous atmosphere. Pt.1. Acta physica Pol. 24 no.1:51-63 J1'63.

1. Institute of Experimental Physics, University, Wroclaw (for Sujak). 2. Chair of Physics, Medical Academy, Wroclaw (for Gasior and Stepniewski).

STEPNIAK, Henryk, mgr inz.

Conference of the photochemical industry in Warsaw. Chemik 15  
no.4:142-144 Ap '62.

1. Ministerstwo Przemyslu Chemicznego, Warszawa.

STEPNIAK, Henryk, mgr inż.

Introduction of nuclear techniques. Chemik 16 no.2:52-55 z '63.

1. Ministerstwo Przemysłu Chemicznego, Warszawa.

STEPNIAK, Henryk, inz.

Thirteenth General Convention of the Association of Engineers  
and Technicians of the Chemical Industry. Chemik 16 no.3:93  
Mr '63.

STEPNIAK, Henryk, inz.

Use of isotopes and isotopic devices. Chemik 16 no. 4:135-136  
Ap '63.

STEPNIAK, Henryk, inz.

Importance of plastics. Chemik 16 no.7/8:217-219 J1-Ag '63.

WITKOWSKA, Joanna, mgr; STEPHIAK, Henryk, inw.

Color and its application. Chemik 16 no.7/8:230-231 J1-Ag '63.

STEPNIAK, Henryk, mgr inz.

We are realizing the directives of party and administration  
in research works. Chemik 16 no.12:376-377 D'63.

STEFNIAK, Henryk, inz.

Development trends of pesticide production and application,  
from the point of view of needs of the national economy.  
Chemik 17 no.1:25-27 Ja'64.

STENICE, Jencyk

The Thirty-fifth Congress of Industrial Chemistry in Warsaw. Pt.1.  
Chemik 17 no.11:420-421 N '64.

STEPNIAK, Henryk, inz.

Labor conditions connected with the chemicalization of  
agriculture. Chemik 18 no.2:63-64 F '65.

STEPNIAK, J.

Results of the study of the demand in the General Consumers' Cooperative establishments of Grunberg. p. 14.  
(PRZEMYSŁ GASTRONOMICZNY. Vol. 11, no. 6, June 1956, Warszawa, Poland)

SU: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 12, Dec. 1957.  
Uncl.

RZUCIDLO, L.; STEPNIAK, R.

Application of enzymatic casein hydrolysates and of yeast extracts in  
diagnostic culture media for cultivation of *Neisseria gonorrhoeae*.  
Przegl. dermat., Warsz. 1 no.2:147-150 Sept 1951. (CLML 23:2)

1. Of the State Institute of Dermatology and Venereology (Director--Prof.  
J. Suchanek, M.D.) in Warsaw.

SAPER, Jerzy; STEPNIAK, Roman

Successful largactil therapy of a case of erythromegalia.  
Przegl. dermat., Warsz. 6 no.5:435-438 Sept-Oct 56.

1. Z Kliniki Neurologicznej A.M. w Warszawie wz. Dyrektora:  
prof. dr. I. Hausmanowa. Z Instytutu Dermatologii i Wenerologii  
p. o. Dyrektora: doc. dr. T. Stepniewski. Kierownik Działu  
Dermatologii: prof. dr. E. Bruner, Warszawa, Klinika Neurologiczna  
Akademii Medycznej, Ociski 6.

(ERYTHROMEALIA, therapy,  
chlorpromazine (Pol))  
(CHLORPROMAZINE, therapeutic use,  
erythromegalia (Pol))

DZULYNSKA, Janina, GAJZLER, Regina, STEPNIAK, Roman

Phosphatides in blood protein fractions of patients with late syphilis. Przegl.derm., Warsz. 8 no.1:1-17 Jan-Feb 58.

1. Z Instytutu Dermatologii i Wenerologii wz. Dyrektora: doc. dr T. Stepniwski Kierownik Działu Klinicznego Wenerologii: doc. dr J. Towpił Kierownik Sekcji Biochemicznej: doc. mgr. J. Dzulynska. Adres: Warszawa, Instytut Dermatologii i Wenerologii, Koszykowa 82a.

(SYPHILIS, blood in

phosphatide determ. in blood protein fractions (Pol))

(BLOOD PROTEINS, in various dis.

late syphilis, phosphatide determ. (Pol))

(PHOSPHOLIPIDS, in blood.

in protein fractions in late syphilis (Pol))

STEPNIAK, Roman

Causes of the appearance of clinical resistance in previously used methods in the treatment of gonorrhea. Przegl. dermat. 48 no.8/10: 331-336 '61.

1. Z Kliniki Dermatologicznej A.M. w Warszawie Kierownik: Prof. dr S. Jablonska.  
(GONORRHEA ther)

ORLOWSKI, Witold J.; ZWIERZCHOWSKI, Ryszard; STEPNIAK, Roman

A case of Ascher's syndrome. Pol. tyg. lek. 18 no.22:795-797  
27 My '63.

1. Z Oddziału Okulistycznego; ordynator: doc. dr med. W.J.  
Orlowski, z Oddziału Laryngologicznego; ordynator: dr R.  
Zwierzchowski i z Oddziału Dermatologicznego w Warszawie;  
ordynator: dr M. Zajfen.  
(EYELIDS) (GOITER) (LIPS) (DISEASES)

ACCESSION NR: AP5019800

PO/0084/65/000/007/0019/0020

AUTHOR: Sztajerwald, J. (Engineer); Baniukiewicz, E.; Stepniak, S.; Weglewski, J. (Engineers); Stanowski, Z. (Master engineer)

TITLE: Ionic fire prevention sensor

SOURCE: Przegląd pożarniczy, no. 7, 1965, 19-20

TOPIC TAGS: fire prevention, fire alarm, ionic fire sensor

ABSTRACT: The article describes an ionic sensor for detecting the outbreak of a fire for which a Polish patent (Patent No. 43 177 Class 74a, 30) was issued on Sept. 22, 1958. The owner of the patent is the Panstwowe Przedsiębiorstwo Poczta Polska, Telegraf i Telefon (Polish State Postal, Telegraph, and Telephone Service) in Warsaw. The sensor is activated during the very early stage of a fire by the presence of minimal quantities of foreign matter in the air, such as smoke, dust, and city gas. When activated, the device immediately disconnects the electric power supply to the malfunctioning apparatus, thus preventing the outbreak of a fire. At the same time, the device can raise the alarm or start air ventilation to cool the defective apparatus. Fig. 1 of the Enclosure shows the schematic of the device, which consists of a diode sensor connected through three conductors (of any length) to a one-stage DC amplifier and the signalling circuit. The cathode

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ACCESSION NR: AP5019800

of the diode sensor is a very thin platinum wire and the anode is made of plates or a spiral. The diode sensor is located in the air stream flowing from the apparatus under control. The cathode is heated to a certain fixed potential. Resistor  $R_2$  controls the device sensitivity. Any change in the cathode temperature (e.g., due to the burning of fine particles or some gases in the air stream) immediately changes the diode current and thus energizes the device. Orig. art. has: 1 figure.

ASSOCIATION: Panstwowe Przedsiębiorstwo Poczta Polska, Telegraf i Telefon, Warsaw (Polish State Postal, Telegraph, and Telephone Service)

SUBMITTED: 22Sep58

ENCL: 01

SUB CODE: IE, EC

NO REF SOV: 000

OTHER: 000

Card 2/3

ACCESSION NR: AP5019800

ENCLOSURE: 01

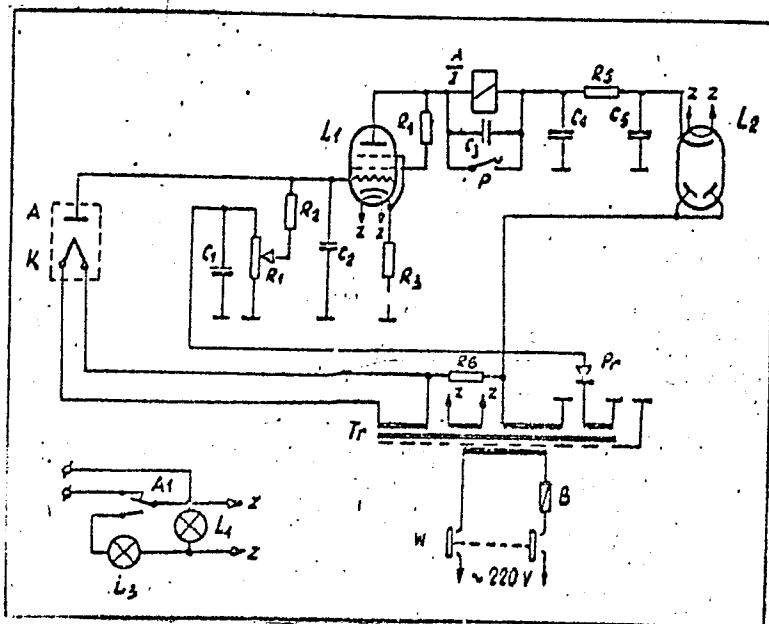


Figure 1. Circuit diagram of an ionic fire alarm.

Card 3/3

STEPNIAK, Stanislaw, inż.

Design problems of drop weight installations. Przegl  
mech 23 no. 2: 50-53 Ja '64.

1. Starszy projektant, Biuro Projektowo-Konstrucyjne,  
Przedsiębiorstwo Projektowania i Dostaw Inwestycyjnych,  
Wroclaw.

STEPNIAK, Stanislaw, inż.

Design problems of pile driving installations. Przegl mech  
23 no. 3:82-84 10 F '64.

1. Starszy projektant, Biuro Projektowo-Konstrukcyjne,  
Przedsiębiorstwo Projektowania i Dostaw Inwestycyjnych,  
Wroclaw.

SIEMIAK, Stanislaw

Coupler hoisting winches and drop work frame. Problemny proj  
hut maszyn 12 no.12:376-320 B '61.

1. Capital Investment Designing and Supplying Agency, Wroclaw.

STEINER, Stanislaw, Inc.

Crushing cast-iron scrap. Irzegl mach 24 no.10 313-300 25 10 1985.

1. Designing Division of the Locomot-Repa, Irzegl.

CZECHOSLOVAKIA/Radio Physics - Reception of Radio Waves.

I

Mag Jour : Ref Zhur Fizika, No 8, 1959, 13691

Author : Hosek, J., Stepnicka, B.

Inst : -

Title : Microwave Frequency Discriminators.

Orig Pub : Slaboprudy obzor, 1958, 19, No 11, 737-745

Abstract : A survey is made of microwave discriminators, used in frequency-stabilization circuits. The Pound discriminator and the discriminator with through resonator are described. A theoretical design is proposed for a discriminator operating in the  $TE_{111}$  mode. The results of the calculation are compared with experiment. In conclusion, a summary table is given that lists the principal parameters of various discriminators.

Card 1/1

S/19-62/000/010/063/034  
A055/A126

Cavity resonator with frequency control

rite in the resonator cavity. The influence of the material and of the geometrical relations of the resonator walls is examined. The characteristics of the system and the diagrams of the fields are reproduced and the structure of the resonator (consisting of framework, ferrite, coil and permanent magnet) is described. The parameters of a real system used for stabilizing the microwave klystron frequency are given. When the volume of the cavity resonator changes, the geometrical relations must be constant. The possibility of using cavity resonators for other frequency ranges with different ferrite types is examined.

V.N.

[Abstracter's note: Complete translation]

Card 2/2

STERNICKA, H.

The demineralization of water. p. 109.

ROCZNIKI BUDOWLANICTWA. (Polskie Towarzystwo Techniczne) Warszawa, Poland.  
Vol. 8, no. 1, 1939.

Monthly List of East European Acquisitions (SEAI) LC, Vol. 9, no. 1, Jan. 1940.

Encl.

KUBANT, J.; STEPNIČKOVÁ, Z.

Polarographic determination of the content of aromatic hydrocarbons  
in coke oven gas. Paliva 41 no.8:253-257 Ag '61.

1. Ustav pro vyzkum paliv.

BRONISLAWA, Bogumila

BRONISLAWA, Bogumila; Given Names

Citizenship: Poland

Age and Sex: Mgr

Attribution: [not given]

Source: Warsaw, Farmacja Polska, Vol XVII, No 15-16, 25 Aug 61,  
pp 323-326

Notes: "Old Pharmaceutical Houses in Poland/"

Stepniewski, L.

✓ 4183

085(075.3)

\* Profic J., Stepniewski L., Szmidtgal E., Zyss B. The Technology of Fats. Part I.

„Technologia tłuszczów”. Cz. 1. Warszawa, 1954, Wyd. Przem. Lek. Spoż., 160, 279 pp., 102 figs., 19 tabs.

Deals with the chemistry of fats. The first part contains sections relating to: general information; production of animal and fish fats, and waxes; treatment of oleaginous seed; purification and refining of fats, and hardening of fats.

S/081/62/000/013/051/054  
B160/B101

AUTHORS: Sikorski, Bronisław, Stepniewski, Ludwik, Grochowski,  
Mieczysław, Świątorzecki, Karol

TITLE: Method of producing a fire-resistant composition for coating  
timber

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 13, 1962, 641, abstract  
13P274 (Polish patent 42701, January 15, 1960)

TEXT: Two different kinds of condensation thermosetting resins (I and II) are mixed with a fire-resistant salt and a low-temperature hardening catalyst. Resin I is prepared by the solution of 100 parts by weight of urea in 260 parts by weight of 37%  $\text{CH}_2\text{O}$  followed by thorough mixing and condensation. The reaction is initiated by atmospheric oxygen and is attended by the evolution of heat. The temperature is raised to  $90^\circ\text{C}$  and held there for three hours (pH 5.2-5.5), after which 1 part by weight of novolak dissolved in  $\text{CH}_3\text{OH}$  is added to stop the reaction. The resulting resin is cooled, dried at  $110^\circ\text{C}$  and ground to a powder. Resin II is

Card 1/2

STEPNIEWSKI, Marian

Scientific Session of the Japanese Mineralogical Association.  
Przegl geol 10 no.10:559 0 '62.

STEPNIEWSKI, Marian

Remarks on kaolinite from Zarowo in Upper Silesia.  
Kwartalnik geol 6 no.4:739 '62.

1. Zaklad Geochemii, Instytut Geologiczny, Warszawa.

STEPNIEWSKI, Marian

Roentgenoscopic methods of quantitative determination of  
the mineral content. Kwartalnik geol 6 no.4:741 '62.

1. Zaklad Geochemii, Instytut Geologiczny, Warszawa.

STEPNIEWSKI, Marian

The State Geological Institute of Japan. Przegl geol 10  
no.12:671-674 D '62.

1. Instytut Geologiczny, Warszawa.

STEPNIEWSKI, Marian

Organization of the geologic schooling system and geologic scientific research in Japan. Przegl geol 11 no.2:111-112 F '63.

1. Instytut Geologiczny, Warszawa.

OSTRZYNOWSKI, Marian

Gamma methods of quantitative determination of the mineral composition of mixed material. Przegl geol 11 no.10:453-455 0'63.

1. Zaklad Geochemii, Instytut Geologiczny, Warszawa.

STEPNIEWSKI, Mieczyslaw, mgr inz.

Production of half-axial flow pumps in the Warsaw Pump Factory.  
Przegl mech 22 no.14:439-442 25 J1 '63.

1. Zastepca glownego konstruktora, Warszawska Fabryka Pomp,  
Warszawa.

Stepniowski, S.

1441  
Stepniowski S. Tentative Use of Polyamide Fibres in the Production of Driving Belts.

„Próba zastosowania włókien polamidowych do produkcji pasów napędowych”. Przegląd Włókienniczy. No. 2, 1953, pp. 43—45, 2 figs., 5 tabs.

Experimental use of polyamide yarn spun in the country (No. 27, breaking length 29.8 km., average strength 11050 g., elongation 36 per cent) for making belts. The belts were produced on a ribbon loom and showed around 50 per cent greater tensile strength; when suitable pastes were used slip was about 40 per cent less than with leather belts. After some preliminary drawing, the polyamide belts do not draw further in the course of work in looms and they can, like leather belts, be connected one to another by sewing. Polyamide belts last as long as leather belts and can be made at one fifth of the cost of a leather belt of the same width.

STEPNIEWSKI, S.; URBANSKI, S.; GAZEL, A.

Cleaning cotton fabrics. Biuletyn Wlok. p. 2.

PRZEGLAD WLOKIENNICZY. (Stowarzyszenie Inzynierow i Technikow Przemyslu Wlokienniczego) Lodz, Poland. Vol. 12, no. 1, Jan. 1958.

Monthly List of East European Accessions (EEAI) LC. Vol. 8, no. 7, July 1959.

Uncl.

STEPNIEWSKI, T

(A)

B 64  
b

61.315.612.2

2147. Production of electrical porcelain. T. STOP-  
MANWELL. *Przegl. Elektrotech.*, 26, 444-ST (Nov.,  
1939) In Polish.

Preparation of the ceramic material, forming of insulators and bushings, drying, firing and final treatments are illustrated and described in detail.

J. LUKASIEWICZ

430.52 METALLURGICAL LITERATURE CLASSIFICATION

3766. THE PROBLEMS OCCURRING IN THE PRODUCTION  
AND USE OF SUSPENSION INSULATORS AND OTHER STRUC-  
TURAL EQUIPMENT OF OVERHEAD TRANSMISSION LINES.

621.315.62

I-II. T. Stepniowski.

Energetyka (Poland), Vol 9, No. 6, 321-7 (1955); Vol 10,  
No. 1, 34-7 (1956). In Polish.

A comprehensive survey of the design, manufacturing  
techniques and testing of single and multiple-disc suspension  
insulators, including modern methods of non-destructive test-  
ing. The design and mechanical arrangement of the towers  
and lines are considered under the headings: (1) mechanical  
strength coordination of the component parts; (2) the use of  
antivibrational types of conductor clamps and line dampers;  
(3) strainers for lines and staywires; (4) the use of crimped  
conductor joints; (5) the design of arcing horns, rings, etc;  
and (6) protection of the structure against corrosion.

E.M. Dembinski

STEPNIEWSKI, T., doc., mgr., inz

The scientific-technical conference "Insulators and fittings  
in high voltage networks." Przegl elektrotechn 37 no.11:463-  
467 '61.

STEPNIEWSKI, T.

Scientific-technical conference on "Insulators and Accessories in  
High-Voltage Networks. Wiad elektrotechn 28 no.8:264 Ag '61.

STEPNIEWSKI, T.

Prevention of dermatologic and venereal diseases in 1951 according to  
the Six Year Plan in health services. Przegl. dermat., Warsz. 1 no.1:21-27  
June 1951. (CML 23:2)